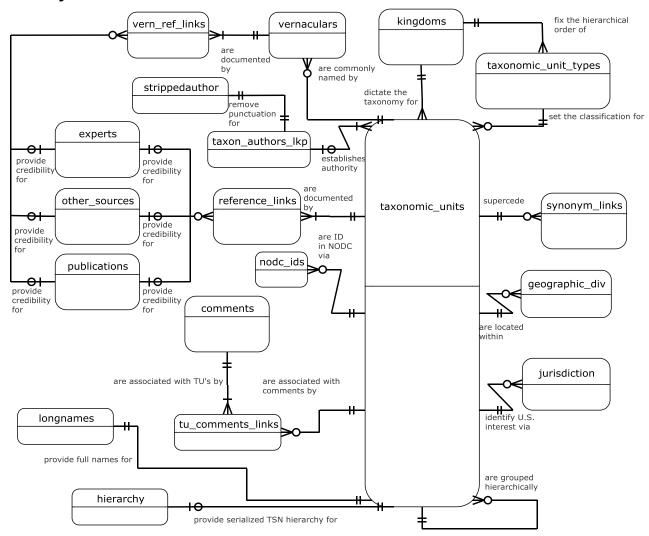
Entity Relationships and Element Definitions

Revision 2.0 12/18/2014

This document is designed to provide information on ITIS data semantics. It describes what is stored, their characteristics, the data requirements of those characteristics, and the relationships between the stored entities.

ITIS Physical Model



1.0 Definitions for the entity taxonomic_units and its elements



1.1 taxonomic_units Description

Taxon name and associated attributes for levels of taxonomic hierarchy structure from kingdom to genus; below genus, binomials/polynomials are identified.

@1 tsn +unit ind1 + unit_name1 + unit ind2 + unit_name2 + unit ind3 + unit_name3 + unit_ind4 + unit_name4 + unnamed_taxon_ind + usage + unaccept reason + credibility_rtng + completeness_rtng + currency_rating + phylo sort sequence + initial_time_stamp + parent_tsn + taxon_author_id + hybrid_author_id + kingdom id+ rank_id + update_date + uncertain_prnt_ind + name usage + complete name

1.2 taxonomic_units Elements

1.2.1 tsn

Name:tsn Element Size: Table: taxonomic_units

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

1.2.2 unit_ind1

Display Picture: Data Type: CHAR SQL Server Name: unit_ind1

Values List: Nullness: NULL

Data Source: CHOICE LIST

Validation Rules: Applicable to the kingdom Chromista, Fungi and Plantae. Description: Indicator of an occurrence of a plant hybrid at the generic level.

1.2.3 unit name1

Name: unit name1 Element Size:35 Table: taxonomic units

Display Picture: Data Type: CHAR SQL Server Name:unit_name1

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST

Validation Rules: For monomials this will be the only name field entered. For uninomials and polynomials, this field will be used for the first part of the name. The names in this position require the initial letter to be capitalized.

Description: The singular or first part of a scientifically accepted label for an occurrence of

Taxonomic Units.

1.2.4 unit ind2

Name: unit_ind2 Element Size:1 Table: taxonomic units

Display Picture: Data Type: CHAR SQL Server Name:unit ind2

Nullness: NULL Values List:

Data Source: CHOICE LIST/USER ENTERED

Validation Rules: Applicable to the kingdom Chromista, Fungi and Plantae.

Description: A hybrid indicator positioned between the first and second parts of a binomial or

polynomial taxonomic name.

1.2.5 unit name2

Name: unit name2 Element Size:35 Table: taxonomic units

Display Picture: Data Type: VARCHAR SQL Server Name:unit name2

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules: For binomials, this will be the last field populated for the name. For trinomials and quadrinomials, this will be the second position populated.

Description: The second part of a scientifically accepted label for a binomial/polynomial

occurrence of Taxonomic Units.

1.2.6 unit ind3

Name: unit ind3 Element Size:7 Table: taxonomic units

Display Picture: Data Type: VARCHAR SQL Server Name:unit ind3

Nullness: NULL Values List:

> ssp. var. subvar.

var.

f. subf. X

Data Source: CHOICE LIST

Validation Rules: All values of this element apply to the kingdoms Chromista, Fungi, and

Plantae. The value ssp. also applies to Animalia, Archaea, Bacteria, Protozoa. Description: A category indicator located within a polynomial taxonomic name.

1.2.7 unit name3

Name: unit_name3 Element Size:35 Table: taxonomic_units

Display Picture: Data Type: VARCHAR SQL Server Name:unit_name3

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules: For trinomials this field will be populated with the last part of the taxonomic name. For quadrinomials and hybrid formulas this field will be populated with the third part of the name.

Description: The third portion of a scientifically accepted label for a polynomial occurrence of Taxonomic Units.

1.2.8 unit ind4

Name: unit_ind4 Element Size:7 Table: taxonomic_units

Display Picture: Data Type: VARCHAR SQL Server Name:unit_ind4

Nullness: NULL Values List:

var. f.

Data Source: CHOICE LIST

Validation Rules: Applicable to the Plant kingdom.

Description: A category indicator located within a polynomial taxonomic name.

1.2.9 unit_name4

Name: unit_name4 Element Size:35 Table: taxonomic_units

Display Picture: Data Type: VARCHAR SQL Server Name:unit_name4

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules: This is the final position populated for quadrinomials or hybrid formulas. Description: The fourth part of a scientifically accepted label for a polynomial occurrence of

Taxonomic Units.

1.2.10 unnamed taxon ind

Name: unnamed taxon ind Element Size:1 Table: taxonomic units

Display Picture: Data Type: CHAR SQL Server Name:

unnamed taxon ind

Nullness: NULL Values List:

Y = Unnamed taxon

N = Named taxon

Data Source: CHOICE LIST

Validation Rules: This field will need to be populated only when an occurrence of Taxonomic

Units possesses a non-standard name.

Description: Indicator for occurrences of Taxonomic Units whose names represent unnamed taxa

and are therefore not standard taxonomic names.

1.2.11 usage

Name: usage Element Size:12 Table: taxonomic units Display Picture: Data Type: VARCHAR SQL Server Name: usage

Nullness: NOT NULL

Values List:

accepted (Chromista, Fungi,

Plantae)

not accepted (Chromista,

Fungi, Plantae)

valid (Animalia, Archaea,

Bacteria, Protozoa)

invalid (Animalia, Archaea,

Bacteria, Protozoa)

Data Source: CHOICE LIST

Validation Rules: Choice lists are dependent upon the values associated with a kingdom. Description: Current standing of an occurrence of a Taxonomic Unit. Note that the usage column is deprecated and will be removed in the future. This attribute has been replaced by name_usage.

1.2.12 unaccept_reason

Nullness: NOT NULL

Name: unaccept_reason Element Size:50 Table: taxonomic units

Display Picture: Data Type: VARCHAR SQL Server Name:

unaccept reason Values List:

Chromista, Fungi, and

Plantae:

database artifact

homonym (illegitimate)

horticultural

invalidly published, nomen

nudum

invalidly published, other

misapplied

orthographic variant

(misspelling)

other, see comments

pro parte rejected name

superfluous renaming

(illegitimate) synonym

unspecified in provided data Animalia, Archaea, Bacteria

and Protozoa:

homonym & junior synonym junior homonym junior synonym misapplied nomen dubium nomen oblitum original name/combination other, see comments pro parte subsequent name/combination unavailable, database artifact unavailable, incorrect orig. spelling unavailable, literature misspelling unavailable, nomen nudum unavailable, other unavailable, suppressed by ruling unjustified emendation unnecessary replacement unspecified in provided

Data Source: CHOICE LIST

Validation Rules: This element is required when usage is set to not accepted (Chromista, Fungi, and Plant) or invalid (Animalia, Archaea, Bacteria and Protozoa). Only those reasons for a particular kingdom should be displayed.

Description: The cause for an occurrence of Taxonomic Units being identified as not accepted/invalid under the usage element.

1.2.13 credibility_rtng

Nullness: NOT NULL credibility_rtng
Values List:

No review; non-peer reviewed

source

No review; untreated NODC

data Minimum

taxonomic/nomenclature

review

TWG standards met

Data Source: CHOICE LIST

Validation Rules: This element will be populated for all occurrences of the Taxonomic Units table. This element is entered by the TWG.

Description: A subjective rating designation as determined by the Taxonomic Work Group reflecting the level of review and the perceived level of accuracy for an occurrence of Taxonomic Units and its associated attributes.

1.2.14 completeness rtng

Name: completeness rtng Element Size:10 Table: taxonomic units

Display Picture: Data Type: CHAR SOL Server Name:

completeness_rtng

Nullness: NULL Values List:

> unknown partial complete

Data Source: CHOICE LIST

Validation Rules: This element will be populated for occurrences of the Taxonomic Units table for which the rank is genus or above. Different ratings may occur for different rank levels. Description: A rating designation reflecting the extent of taxonomic completeness for a group.

1.2.15 currency_rating

Element Size:7 Name: currency_rating Table: taxonomic_units

Display Picture: Data Type: CHAR **SOL Server Name:**

currency_rating

Nullness: NULL Values List:

unknown

A specific 4 digit year, e.g.

1993

Data Source: USER ENTERED

Validation Rules: This element will be populated for rows within the Taxonomic Units table for which the taxon's rank is genus or above. Different ratings may occur at different rank levels. Description: A rating designation reflecting the year of revision/source for a group.

1.2.16 phylo sort seg

Name: phylo_sort_seq Element Size: Table: taxonomic units

Display Picture: Data Type: SMALLINT **SQL** Server Name:

phylo sort seq

Nullness: NULL Values List:

Data Source: NOT IN USE

Validation Rules: This field is required for ranks from kingdom to order inclusive.

Description: A sequence for an occurrence of Taxonomic Units with ranks between kingdom and

order, inclusive, that will allow output to be displayed in phylogenetic order.

1.2.17 initial time stamp

Name: initial time stamp Element Size: Table: taxonomic units

Display Picture: yyyy-mm-dd Data Type: DATETIME SOL Server Name:

hh:mm:ss.sss initial time stamp

Values List: Nullness: NOT NULL

Data Source: SYSTEM GENERATED

Validation Rules:

Description: Date and time at which an occurrence of Taxonomic Units is initially loaded into the

ITIS database.

1.2.18 parent_tsn

Name:parent_tsn Element Size: Table: taxonomic_units

Display Picture: Data Type: INT SQL Server Name: parent_tsn

Nullness: NULL Values List:

Data Source: CHOICE LIST

Validation Rules: Nulls allowed by the parent should previously exist in the database or be

concurrently input with the subject Taxonomic Unit record.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units. The taxonomic serial number for the direct parent of the subject occurrence of Taxonomic

Units.

1.2.19 taxon_author_id

Display Picture: Data Type: **INT** SQL Server Name:

taxon_author_id

Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A unique identifier for the author(s) of a taxonomic name.

1.2.20 hybrid_author_id

Display Picture: Data Type: INT SQL Server Name:

hybrid author id

Nullness: NULL Values List:

Data Source: CHOICE LIST/USER ENTERED

Validation Rules: Applicable to the kingdom Chromista, Fungi, Plantae

Description: The unique identifier for the author(s) of a taxonomic name which has been identified as the second part of a hybrid formula. For example Agrostis L. X Polypogon Desf.

1.2.21 kingdom id

Name: kingdom_id Element Size: Table: taxonomic_units

Display Picture: Data Type: SMALLINT SQL Server Name:

kingdom_id

Nullness: NOT NULL Values List:

1 Bacteria 2 Protozoa

3 Plantae4 Fungi

5 Animalia6 Chromista

7 Archaea

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A unique identifier for the highest level of the taxonomic hierarchy structure.

1.2.22 rank_id

Name: rank_id Element Size: Table: taxonomic_units

Display Picture: Data Type: SMALLINT SQL Server Name: rank_id

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A unique identifier for a specific level within the taxonomic hierarchy.

Plant	Animal	Fungi/Chromista	Bacteria/Protozoa	ITIS rank_id
Kingdom	Kingdom	Kingdom	Kingdom	10
Subkingdom	Subkingdom	Subkingdom	Subkingdom	20
Infrakingdom	Infrakingdom			25
	Superphylum			27
Division	Phylum	Division	Phylum	30
Subdivision	Subphylum	Subdivision	Subphylum	40
Infradivision	Infraphylum			45
Superclass	Superclass	Superclass (Chromista only)	Superclass	50
Class	Class	Class	Class	60
Subclass	Subclass	Subclass	Subclass	70
	Infraclass		Infraclass	80
Superorder	Superorder	Superorder	Superorder	90
Order	Order	Order	Order	100
Suborder	Suborder	Suborder	Suborder	110
	Infraorder		Infraorder	120
	Section			124
	Subsection			126
	Superfamily		Superfamily	130
Family	Family	Family	Family	140
Subfamily	Subfamily	Subfamily	Subfamily	150
Tribe	Tribe	Tribe	Tribe	160
Subtribe	Subtribe	Subtribe	Subtribe	170
Genus	Genus	Genus	Genus	180
Subgenus	Subgenus	Subgenus	Subgenus	190
Section		Section		200
Subsection		Subsection		210

Plant	Animal	Fungi/Chromista	Bacteria/Protozoa	ITIS rank_id
Species	Species	Species	Species	220
Subspecies	Subspecies	Subspecies	Subspecies	230
Variety	Variety	Variety	Variety (Protozoa only)	240
	Form		• /	245
Subvariety	Race	Subvariety		250
	Stirp			255
Form	Morph	Form		260
	Aberration			265
Subform		Subform		270
			Unspecified	300

1.2.23 update_date

Name: update_date Element Size: Table: taxonomic_units

Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 **SMALLDATETIME** update_date Values List:

Nullness: NOT NULL

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

1.2.24 uncertain_prnt_ind

Name: uncertain_prnt_ind Element Size:3 Table: taxonomic_units

Display Picture: Data Type: CHAR SOL Server Name:

uncertain_prnt_ind Nullness: NULL Values List:

Yes = of uncertain placement

No = certain placement

Data Source: CHOICE LIST

Validation Rules: This field is set to true when an occurrence of Taxonomic Units has uncertain

placement.

Description: Indicator for occurrences of Taxonomic Units where placement is uncertain.

1.2.25 name usage

Name: name usage Element Size:12 Table: taxonomic units

Display Picture: Data Type: VARCHAR SQL Server Name:

name usage

Nullness: NOT NULL. Values List:

accepted (Chromista, Fungi,

Plantae)
not accepted (Chromista,
Fungi, Plantae)
valid (Animalia, Archaea,
Bacteria, Protozoa)
invalid (Animalia, Archaea,
Bacteria, Protozoa)

Data Source: CHOICE LIST

Validation Rules: Choice lists are dependent upon the values associated with a kingdom. Description: Current standing of an occurrence of a Taxonomic Unit. A duplicate of usage element. Note usage values moved to name_usage because "usage" is a SQL reserved word which sometimes causes issues with database code.

1.2.26 complete_name

Name: complete_name Element Size:300 Table: taxonomic_units

Display Picture: Data Type: VARCHAR SQL Server Name: complete_name

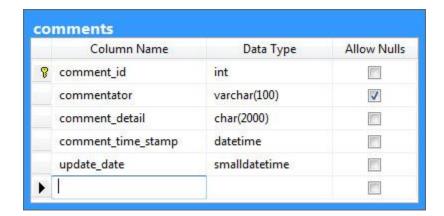
Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unit indicators and unit name fields concatenated and trimmed to present entire scientific name, without taxon author. Designed to be helpful when searching for taxa by scientific name.

2.0 Definitions for the entity comments and its elements



2.1 comments Description

A mechanism for recording history or detail deemed important for an occurrence(s) of Taxonomic Units.

@1 comment_id + commentator +

comment_detail +
comment_time_stamp +
update_date

2.2 comments Elements

2.2.1 comment_id

Name: comment_id Element Size: Table: comments

Display Picture: Data Type: INT SQL Server Name: comment id

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unique identifier for remarks associated with an occurrence of Taxonomic

Units.

2.2.2 commentator

Name: commentator Element Size:100 Table: comments

Display Picture: Data Type: VARCHAR SQL Server Name: commentator

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The name of the person associated with the comment being provided with regard to

an occurrence of Taxonomic Units.

2.2.3 comment_detail

Name: comment_detail Element Size:2000 Table: comments

Display Picture: Data Type: CHAR SQL Server Name: comment_detail

Nullness: NOT NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Remarks providing additional information regarding an occurrence of Taxonomic

Units.

2.2.4 comment_time_stamp

Nullness: NOT NULL Values List:

Data Source: SYSTEM ENTERED

Validation Rules:

Description: The date and time at which a comment associated with an occurrence of Taxonomic

Units is entered.

2.2.5 update_date

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

3.0 Definitions for the entity experts and its elements

	Column Name	Data Type	Allow Nulls
P	expert_id_prefix	char(3)	
P	expert_id	int	
	expert	varchar(100)	V
	exp_comment	varchar(500)	V
	update_date	smalldatetime	V
	41		

3.1 experts Description

A taxonomist who is the responsible source for an occurrence of Taxonomic Units being recognized by and added to the ITIS database, or for changes being made to an occurrence of Taxonomic Units existing in the ITIS database, or who provides credibility for vernacular names.

@1 expert_id_prefix +
@2 expert_id +
expert +
exp_comment +
update_date

3.2 experts Elements

3.2.1 expert_id_prefix

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A prefix attached to a serial number to identify the record as existing in Experts.

3.2.2 expert_id

Name: expert_id Element Size: Table: experts

Display Picture: Data Type: INT SQL Server Name: expert_id

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unique identifier established for a specific expert in the field of taxonomy whose

work is being utilized by the ITIS.

3.2.3 expert

Name: expert Element Size: 100 Table: experts

Display Picture: Data Type: VARCHAR SQL Server Name: expert

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The name of the taxonomic expert providing credence to the taxonomy,

nomenclature or attributes of a Taxonomic Unit's occurrence for the ITIS.

3.2.4 exp_comment

Name: exp_comment Element Size:500 Table: experts

Display Picture: Data Type: VARCHAR SQL Server Name:

exp_comment

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Remarks noted by or associated with a taxonomic expert who is providing credence

to the taxonomy, nomenclature or attributes of a Taxonomic Unit's occurrence.

3.2.5 update_date

Display Picture: yyyy-mm-dd Data Type: SQL Server Name:

00:00:00 SMALLDATETIME update_date
Nullness: NULL values List:

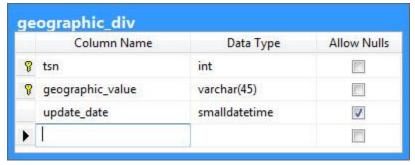
Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

4.0 Definitions for the entity geographic_div and its elements



4.1 geographic_div Description

Geographic association for the referenced occurrence in Taxonomic Units.

@1 tsn +
@2 geographic_value +
update_date

4.2 geographic_div Elements

4.2.1 tsn

Name:tsn Element Size: Table: geographic_div
Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Half of a two-part key in geographic div.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

4.2.2. geographic_value

Name: geographic_value Element Size:45 Table: geographic_div

Display Picture: Data Type: VARCHAR SQL Server Name:

Nullness: NOT NULL geographic_value
Values List:

North America Middle America Caribbean South America

Europe & Northern Asia

(excluding China)

Africa

Southern Asia Australia Oceania

Antarctica/Southern Ocean Eastern Atlantic Ocean Indo-West Pacific East Pacific

Data Source: CHOICE LIST

Validation Rules: Half of a two-part key in geographic_div.

Description: Label given to a geographic division as identified by the Taxonomic Work Group.

4.2.3 update_date

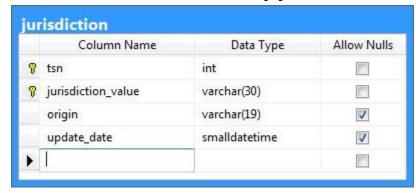
Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

5.0 Definitions for the entity jurisdiction and its elements



5.1 jurisdiction Description

Association of a referenced occurrence of Taxonomic Units with one or more US jurisdictional units. Also provides an identification of whether the taxon was native and/or introduced to the unit.

@1 tsn +
@2 jurisdiction_value +
origin +
update_date

5.2 jurisdiction Elements

5.2.1 tsn

Name:tsn Element Size: Table: jurisdiction

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic

Units. Half of a two-part key in jurisdiction.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic

Units.

5.2.2 jurisdiction value

jurisdiction_value

Nullness: NOT NULL Values List:
Continental US

Alaska Hawaii

Central Pacific Territories

Caribbean Territories

Canada Mexico

Data Source: CHOICE LIST

Validation Rules: Half of a two-part key in jurisdiction.

Description: Label signifying a US jurisdictional unit as defined by the TWG, and Canada.

5.2.3 origin

Name: origin Element Size:19 Table: jurisdiction

Display Picture: Data Type: VARCHAR SQL Server Name: origin

Nullness: NULL Values List:
Native

Introduced

Native & Introduced

Incidental

Data Source: CHOICE LIST

Validation Rules:

Description: Indication of whether an occurrence of Taxonomic Units is native and/or introduced

to a US jurisdictional unit.

5.2.4 update_date

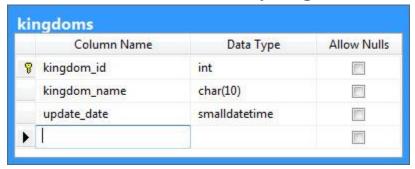
Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

6.0 Definitions for the entity kingdoms and its elements



6.1 kingdoms Description

The highest rank in the taxonomic hierarchical structure

@1 kingdom_id + kingdom_name + update_date +

6.2 kingdoms Elements

6.2.1 kingdom_id

Name:kingdom_id Element Size: Table: kingdoms
Display Picture: Data Type: INT SQL Server Name:

Nullness: NOT NULL UNIQE kingdom_id
Values List:

1 Bacteria2 Protozoa3 Plantae4 Fungi5 Animalia6 Chromista7 Archaea

Protozoa

Data Source: SYSTEM GENERATED

Validation Rules:.

Description: A unique identifier for the highest level of the taxonomic hierarchy structure.

6.2.2 kingdom_name

Nullness: NOT NULL kingdom_name
Values List:
Bacteria

Plantae Fungi Animalia Chromista Archaea

Data Source: CHOICE LIST

Validation Rules:

Description: The label associated with the highest level of the taxonomic hierarchy structure.

6.2.3 update_date

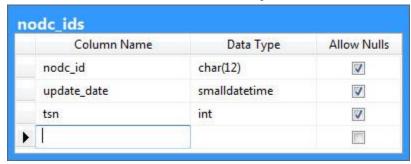
Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

7.0 Definitions for the entity nodc_ids and its elements



7.1 nodc_ids Description

A mechanism for maintaining the association between the NODC data applications and the ITIS database to support users' needs

nodc_id + update_date + tsn

7.2 nodc_ids Elements

7.2.1 nodc_id

Name: nodc_id Element Size:12 Table: nodc_ids

Display Picture: Data Type: CHAR SQL Server Name: nodc_id

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: An identifier previously assigned to an occurrence of Taxonomic Units by the

National Oceanographic Data Center.

7.2.2 update_date

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

7.2.3 tsn

Name:tsn Element Size: Table: nodc_ids

Display Picture: Data Type: INT SQL Server Name: tsn

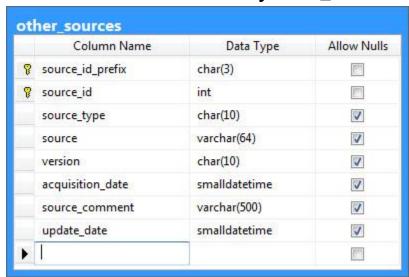
Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

8.0 Definitions for the entity other_sources and its elements



8.1 other sources Description

References, other than persons or publications, that are taxonomically significant for additions or changes to occurrences of the Taxonomic_units table and/or associated data, or that provide credibility for vernacular names.

@1 source_id_prefix + @2 source id + source type + source + version + acquisition_date + source comment + update_date

8.2 other sources Elements

8.2.1 source_id_prefix

Name: source_id_prefix Element Size:3 Table: other_sources Display Picture: Data Type: CHAR SOL Server Name: source_id_prefix Nullness: NOT NULL Values List:SRC

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A prefix attached to a serial id to identify the record as an Other Source.

8.2.2 source id

Name: source id Element Size: Table: other sources

Display Picture: Data Type: INT SQL Server Name: source id

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unique identifier for a supplier of information, other than a person or publication, lending credence to the establishment of or changes to an occurrence of Taxonomic

Units.

8.2.3 source type

Name: source type Element Size:10 Table: other sources Display Picture: Data Type: CHAR SOL Server Name: source_type

Values List:

Nullness: NULL

Data Source: USER ENTERED

Validation Rules:

Description: The designation of the kind of supplier providing information to the ITIS (other than a person or publication); e.g. database.

8.2.4 source

Name: source Element Size:64 Table: other_sources

Display Picture: Data Type: VARCHAR SQL Server Name: source

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The name of the supplier of information, other than a person or publication, to the ITIS database. Examples include, among others, Catalogue of the Vascular Plants of Madagascar and Hawaiian Arthropod Checklist Database.

8.2.5 version

Name: version Element Size:10 Table: other_sources

Display Picture: Data Type: CHAR SQL Server Name: version

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Number, date or other identifying characteristic of the source which indicates the

functionality and/or data at a point in time in the life of the system, database, etc.

8.2.6 acquisition_date

Data Source: USER ENTERED

Validation Rules:

Description: The date on which ITIS acquired the data it is utilizing from a source other than a

publication or expert.

8.2.7 source_comment

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Remarks associated with the provider of information to the ITIS (other than a person

or publication).

8.2.8 update date

Name: update_dateElement Size:Table: other_sourcesDisplay Picture: yyyy-mm-ddData Type:SQL Server Name:00:00:00SMALLDATETIMEupdate date

Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

9.0 Definitions for the entity publications and its elements

	Column Name	Data Type	Allow Nulls
B	pub_id_prefix	char(3)	
P	publication_id	int	
	reference_author	varchar(100)	V
	title	varchar(255)	V
	publication_name	varchar(255)	
	listed_pub_date	datetime	
	actual_pub_date	datetime	V
	publisher	varchar(80)	V
	pub_place	varchar(40)	
	isbn	varchar(16)	
	issn	varchar(16)	V
	pages	varchar(15)	V
	pub_comment	varchar(500)	
	update_date	smalldatetime	
			[87]

9.1 publications Description

Printed references that are taxonomically significant for additions or changes to occurrences of the Taxonomic_units table and/or associated data, or that provide credibility for approved vernacular names.

```
@1 publication_id_prefix +
@2 publication_id +
reference_author +
title +
publication_name +
listed_pub_date +
actual_pub_date +
publisher +
pub_place +
isbn +
```

issn + pages + pub_comment + update_date

9.2 publications Elements

9.2.1 publication_id_prefix

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A prefix attached to a serial number to associate the record with the Publications

table.

9.2.2 publication_id

Display Picture: Data Type: INT SQL Server Name: publication

_id

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unique identifier of a printed reference.

9.2.3 reference author

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Author(s) of a printed reference.

9.2.4 title

Name: title Element Size:255 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: title

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The identifying name given an article contained in a printed reference.

9.2.5 publication_name

Nullness: NULL Values List:

Data Source: CHOICE LIST/USER ENTERED

Validation Rules:

Description: The identifying title of the printed reference, including volume and number, if

applicable.

9.2.6 listed_pub_date

Data Source: USER ENTERED

Validation Rules:

Description: The date printed on a journal or other printed reference.

9.2.7 actual_pub_date

Data Source: USER ENTERED

Validation Rules: This date should be greater than or equal to the listed date if such is populated. In kingdoms Animalia and Protozoa it should also correspond to the date associated with the taxon_author if this is the reference in which the subject taxon is described.

Description: The true date on which a journal or other written reference was published. It may or may not correspond with the publication's listed date.

9.2.8 publisher

Name: publisher Element Size: 80 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: publisher

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Producer of a printed reference.

9.2.9 pub place

Name: pub place Element Size:40 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: pub place

Nullness: NULL Values List:

Data Source: **USER ENTERED**

Validation Rules:

Description: Location of the publisher of a printed reference.

9.2.10 isbn

Name: isbn Element Size:16 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: isbn

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The ISBN number of a book cited; older publications and some alternatively

published books do not have assigned ISBN numbers.

9.2.11 issn

Name: issn Element Size:16 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: issn

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: The ISSN number of a journal cited; older journals and some alternatively published

publications do not have assigned ISSN numbers.

9.2.12 pages

Name: pages Element Size: 15 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name: pages

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Page numbers within a printed reference to which the specific citation refers.

9.2.13 pub_comment

Name: pub_comment Element Size:500 Table: publications

Display Picture: Data Type: VARCHAR SQL Server Name:

pub_comment

Nullness: NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: Remarks associated with the printed reference cited.

9.2.14 update_date

00:00:00 SMALLDATETIME update_date

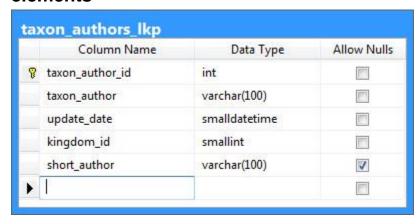
Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

10.0 Definitions for the entity taxon_authors_lkp and its elements



10.1 taxon_authors_lkp Description

Reference to authors of taxa for all kingdoms.

@1 taxon_author_id +

taxon_author +

update_date +

kingdom_id +

 $short_author$

10.2 publications Elements

10.2.1 taxon author id

Name: taxon author id Element Size: Table: taxon authors lkp

Display Picture: Data Type: INT SQL Server Name: taxon_author_id

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A unique identifier for the author(s) of a taxonomic name.

10.2.2 taxon athor

Name: taxon_author Element Size:100 Table: taxon_authors_lkp

Display Picture: Data Type: VARCHAR SQL Server Name:

taxon_author

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST/USER ENTERED

Validation Rules: For authorities associated with the kingdoms Animalia and Protozoa the author(s) and the actual date of the publication in which the author(s) first described the taxon are required. For authorities associated with the kingdoms Archaea Bacteria, the author(s) and the actual date of the publication in which the author(s) first described the taxon and the emending authors with the date of the emendation are required. For authorities associated with the Chromista, Fungi, and Plantae kingdom only author(s) and any emending authors are required.

Note: Initially, authors/dates may not be available for all records Description: The author(s) associated with the name of a taxon.

10.2.3 update_date

Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 SMALLDATETIME update_date
Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

10.2.4 kingdom_id

Name:kingdom id Element Size: Table: taxon authors lkp

Display Picture: Data Type: INT SQL Server Name:

kingdom_id

Nullness: NOT NULL Values List:

1 Bacteria 2 Protozoa 3 Plantae 4 Fungi 5 Animalia 6 Chromista

7 Archaea

Data Source: SYSTEM GENERATED

Validation Rules:.

Description: A unique identifier for the highest level of the taxonomic hierarchy structure.

10.2.5. short author

Name: short_author Element Size:100 Table: taxon_authors_lkp

Display Picture: Data Type: VARCHAR SQL Server Name:

short_author

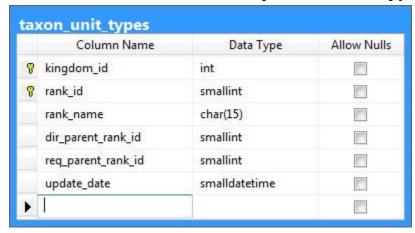
Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The author(s) associated with the name of a taxon with parenthesis, commas and periods removed. Designed to be helpful when searching for an author whose name contains a different punctuation for different taxon names.

11.0 Definitions for the entity taxon_unit_types and its elements



11.1 taxon_unit_types Description

Defines the levels associated with the taxonomic hierarchical structure and establishes the rank order for an occurrence of the Taxonomic Units.

@1 kingdom_id +
@2 rank_id +
rank_name +
direct_parent_rank_id +
required_parent_rank_id +
update date

11.2 taxon_unit_types Elements

11.2.1 kingdom_id

Name:kingdom_id Element Size: Table: taxon_unit_types SQL Server Name: Display Picture: Data Type: INT kingdom id Values List: Nullness: NOT NULL 1 Bacteria 2 Protozoa 3 Plantae 4 Fungi 5 Animalia 6 Chromista 7 Archaea

Data Source: SYSTEM GENERATED

Validation Rules: Half of a two-part key in taxon_unit_types.

Description: A unique identifier for the highest level of the taxonomic hierarchy structure.

11.2.2 rank_id

Name: rank _id Element Size: Table: taxon_unit_types

Display Picture: Data Type: SMALLINT SQL Server Name: rank _id

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: Half of a two-part key in taxon_unit_types

Description: A unique identifier for a specific level within the taxonomic hierarchy.

11.2.3 rank name

_name

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST

Validation Rules:

Description: The label associated with the specific level of a taxonomic hierarchy.

Plant	Animal	Fungi/Chromista	Bacteria/Protozoa	ITIS rank_id
Kingdom	Kingdom	Kingdom	Kingdom	10
Subkingdom	Subkingdom	Subkingdom	Subkingdom	20
Infrakingdom	Infrakingdom			25
	Superphylum			27
Division	Phylum	Division	Phylum	30
Subdivision	Subphylum	Subdivision	Subphylum	40
Infradivision	Infraphylum			45
Superclass	Superclass	Superclass (Chromista only)	Superclass	50
Class	Class	Class	Class	60
Subclass	Subclass	Subclass	Subclass	70
	Infraclass		Infraclass	80
Superorder	Superorder	Superorder	Superorder	90
Order	Order	Order	Order	100
Suborder	Suborder	Suborder	Suborder	110
	Infraorder		Infraorder	120
	Section			124
	Subsection			126
	Superfamily		Superfamily	130
Family	Family	Family	Family	140
Subfamily	Subfamily	Subfamily	Subfamily	150

Plant	Animal	Fungi/Chromista	Bacteria/Protozoa	ITIS rank_id
Tribe	Tribe	Tribe	Tribe	160
Subtribe	Subtribe	Subtribe	Subtribe	170
Genus	Genus	Genus	Genus	180
Subgenus	Subgenus	Subgenus	Subgenus	190
Section		Section		200
Subsection		Subsection		210
Species	Species	Species	Species	220
Subspecies	Subspecies	Subspecies	Subspecies	230
Variety	Variety	Variety	Variety (Protozoa only)	240
	Form		• /	245
Subvariety	Race	Subvariety		250
	Stirp			255
Form	Morph	Form		260
	Aberration			265
Subform		Subform		270
			Unspecified	300

11.2.4 dir_parent_rank_id

Name: dir_parent_rank_id Element Size: Table: taxon_unit_types

Display Picture: Data Type: SMALLINT SQL Server Name:

dir_parent_rank_id

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST

Validation Rules:

Description: The unique identifier for the rank of the closest parent of an occurrence of

Taxonomic Units as defined by the kingdom's rank rules.

11.2.5 req_parent_rank_id

Display Picture: Data Type: SMALLINT SQL Server Name:

req_parent_rank_id

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST

Validation Rules:

Description: The unique identifier for the closest, required parent of an occurrence of Taxonomic

Units as established by the respective kingdom's rank rules.

11.2.6 update_date

Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 SMALLDATETIME update_date

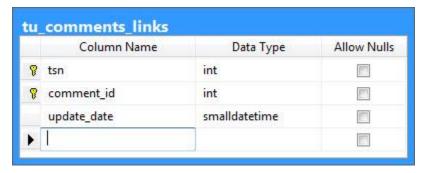
Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

12.0 Definitions for the entity tu_comments_links and its elements



12.1 tu_comments_links Description

An intersection table which provides the means for establishing a many to many relationship between an occurrence of Taxonomic Units and associated Comments.

@1 tsn +
@2 comment_id +
update_date

12.2 tu_comments_links Elements

12.2.1 tsn

Name:tsn Element Size: Table: tu_comments_links

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Half of a two-part key in tu_comments_links.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

12.2.2 comment id

_id

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: Half of a two-part key in tu_comments_links.

Description: The unique identifier for remarks associated with an occurrence of Taxonomic

Units.

12.2.3 update_date

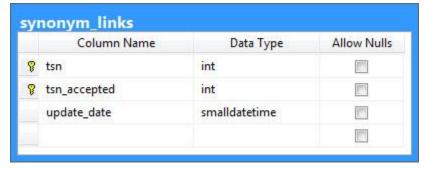
Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 SMALLDATETIME update_date
Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

13.0 Definitions for the entity synonym_links and its elements



13.1 tu_comments_links Description

A mechanism to provide the link between an accepted taxonomic name and alternates or predecessors to it.

@1 tsn + @2 tsn_accepted +

update_date

13.2 synonym_links Elements

13.2.1 tsn

Name:tsn Element Size: Table: synonym_links
Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Half of a two-part key in synonym links.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic

Units.

13.2.2 tsn accepted

Name:tsnElement Size:Table: synonym_linksDisplay Picture:Data Type: INTSQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: USER ENTERED

Validation Rules: Must have usage of valid or accepted name. Half of a two-part key in

synonym_links.

Description: The taxonomic serial number assigned to the accepted occurrence of Taxonomic

Units to which a synonym is associated.

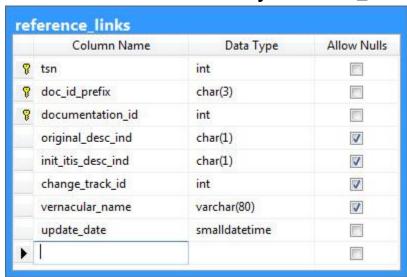
13.2.3. update_date

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

14.0 Definitions for the entity reference_links and its elements



14.1 reference links Description

An intersection table that provides a link between occurrences of Taxonomic Units and occurrences of publications, experts, or other sources.

@1 tsn +@2 doc_id_prefix+ @3 documentation id + original desc ind + init_itis_desc_ind + change track id + vernacular_name + update date

14.2 reference links Elements

14.2.1 tsn

Name:tsn Element Size: Table: reference links Data Type: INT Display Picture: SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Part of a three-part key in reference links.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

14.2.2 doc_id_prefix

Name: doc_id_prefix Element Size:3 Table: reference_links Display Picture: Data Type: CHAR SOL Server Name:

doc id prefix

Values List: EXP, PUB, SRC Nullness: NOT NULL

Data Source: SYSTEM GENERATED

Validation Rules: Part of a three-part key in reference_links.

Description: A designation affixed to the documentation id identifying the reference as a

publication, expert or other source.

14.2.3 documentation id

Name: documentation id Element Size: Table: reference links Display Picture: Data Type: INT **SOL Server Name:** documentation id Nullness: NOT NULL

Values List:

Data Source: SYSTEM GENERATED

Validation Rules: Part of a three-part key in reference links.

Description: The serial portion of the identifier created for either the Publications table, the

Experts table or the Other_Sources table used with the documentation_id_prefix to provide the reference link with an instance from the Taxonomic_units table.

14.2.4 original_desc_ind

original_desc_ind

Nullness: NULL Values List: If selected, the

indicator will be set to true

Data Source: CHOICE LIST

Validation Rules:

Description: Indicator used to identify that this occurrence represents the reference of the original

description, when available.

14.2.5. init itis desc ind

Display Picture: Data Type: CHAR SQL Server Name:

init_itis_desc_ind

Nullness: NULL Values List: If selected, the indicator will be set to true

Data Source: NOT IN USE

Validation Rules:

Description: Indicator used to identify the reference(s) that serve as the reason for an occurrence

of Taxonomic Units being recognized where the original reference is unavailable.

14.2.6. change_track_id

Display Picture: Data Type: INT SQL Server Name:

change_track _id

Nullness: NULL Values List:

Data Source: NOT IN USE

Validation Rules:

Description: The unique identifier assigned to a change made to an occurrence of Taxonomic

Units.

14.2.7 vernacular name

Name: vernacular name Element Size:80 Table: reference links

Display Picture: Data Type: VARCHAR SQL Server Name:

vernacular_name

Nullness: NULL Values List:

Data Source: NOT IN USE

Validation Rules:

Description: A common name associated with an occurrence of Taxonomic Units.

14.2.8 update_date

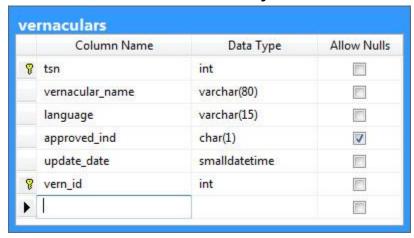
Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 SMALLDATETIME update_date
Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

15.0 Definitions for the entity vernaculars and its elements



15.1 vernaculars Description

Common names associated with an occurrence in Taxonomic Units.

@1 tsn +
vernacular_name +
language +
approved_ind +
update_date +
@2 vern_id

15.2 vernaculars Elements

15.2.1 tsn

Name:tsn Element Size: Table: vernaculars

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Half of a two-part key in vernaculars.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic

Units.

15.2.2 vernacular name

Name: vernacular_name Element Size:80 Table: vernaculars Display Picture: Data Type: VARCHAR SOL Server Name: vernacular name

Nullness: NOT NULL Values List:

Data Source: USER ENTERED

Validation Rules:

Description: A common name associated with an occurrence of Taxonomic Units.

15.2.3 language

Name: language Element Size:15 Table: vernaculars

Display Picture: Data Type: VARCHAR SQL Server Name: language

Nullness: NOT NULL Values List:

Data Source: CHOICE LIST/USER ENTERED

Validation Rules:

Description: Native language from which the vernacular name originates; e.g. English, French,

Spanish, Portuguese, etc.

15.2.4 approved_ind

Name: approved_ind Element Size:1 Table: vernaculars Display Picture: Data Type: CHAR SQL Server Name: approved ind

Nullness: NULL Values List: If selected, the

indicator will be set to true.

Data Source: CHOICE LIST

Validation Rules: If the approved ind is set to true, then the reference identifying the vernacular

must be entered.

Description: Designation identifying those vernacular names authorized for use by regulation,

statute, etc.

15.2.5 update_date

Name: update_date Table: vernaculars Element Size: Display Picture: yyyy-mm-dd Data Type: SQL Server Name: 00:00:00 **SMALLDATETIME** update date Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide

assistance to those downloading data on a periodic basis.

15.2.6 vern_id

Name: vern_id Element Size: Table: vernaculars

Display Picture: Data Type: INT SQL Server Name: vern_id

Nullness: NOT NULL UNIQE Values List:

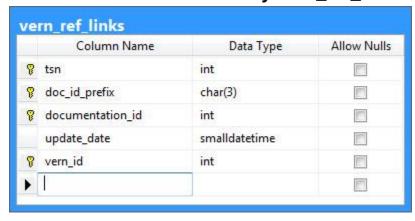
Data Source: SYSTEM GENERATED

Validation Rules: Half of a two-part key in vernaculars.

Description: The serial portion of the identifier created for a vernacular name associated with an

occurrence of a Taxonomic Unit.

16.0 Definitions for the entity vern_ref_links and its elements



16.1 vern_ref_links Description

An intersection table that provides a link between occurrences of Vernaculars and occurrences of Publications, Experts, or Other_Sources.

@1 tsn +

@2 doc_id_prefix +

@3 documentation_id +

update_date +

@4 vern id +

16.2 vern ref links Elements

16.2.1 tsn

Name:tsn Element Size: Table: vern_ref_links

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units. Part of a four-part key in vern_ref_links.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic

Units.

16.2.2 doc_id_prefix

Name: doc_id_prefixElement Size:3Table: vern_ref_linksDisplay Picture:Data Type: CHARSQL Server Name:

doc_id_prefix

Nullness: NOT NULL Values List: EXP, PUB, SRC

Data Source: SYSTEM GENERATED

Validation Rules: Part of a four-part key in vern_ref_links.

Description: A designation affixed to the documentation_id identifying the reference as a

publication, expert or other source.

16.2.3 documentation_id

 Name: documentation_id
 Element Size:
 Table: vern_ref_links

 Display Picture:
 Data Type: INT
 SQL Server Name: documentation_id

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: Part of a four-part key in vern_ref_links.

Description: The serial portion of the identifier created for either the Publications table, the Experts table or the Other_Sources table used with the documentation_id_prefix to provide the reference link with an instance from the vernaculars table.

16.2.4 update_date

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The date on which a record is modified. The purpose of this element is to provide assistance to those downloading data on a periodic basis.

16.2.5 vern_id

Name: vern_id Element Size: Table: vern_ref_links

Display Picture: Data Type: INT SQL Server Name: vern_id

Nullness: NOT NULL Values List:

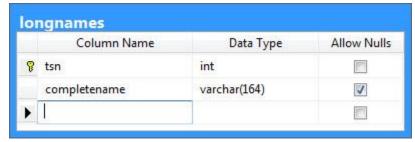
Data Source: SYSTEM GENERATED

Validation Rules: Part of a four-part key in vernaculars.

Description: The serial portion of the identifier created for a vernacular name associated with an

occurrence of a Taxonomic Unit.

17.0 Definitions for the entity longnames and its elements



17.1 longnames Description

A support table that provides a full scientific name without taxon author for Taxonomic Units.

@1 tsn + completename

17.2 longnames Elements

17.2.1 tsn

Name:tsn Element Size: Table: longnames

Display Picture: Data Type: INT SQL Server Name: tsn

Nullness: NOT NULL UNIQUE Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units.

Description: Taxonomic Serial Number. The unique identifier for an occurrence of Taxonomic Units.

17.2.2 completename

Name: completename Element Size:164 Table: longnames

Display Picture: Data Type: VARCHAR SQL Server Name: completename

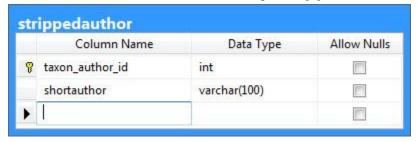
Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The unit indicators and unit name fields concatenated and trimmed to present entire scientific name, without taxon author. Designed to be helpful when searching for taxa by scientific name.

18.0 Definitions for the entity strippedauthor and its elements



18.1 strippedauthor Description

A support table that provides the author(s) associated with the name of a taxon with parenthesis, commas and periods removed. Designed to be helpful when searching for an author whose name contains a different punctuation for different taxon names.

@1 taxon_author_id + shortauthor

18.2 strippedauthor Elements

18.2.1 taxon_author_id

Data Source: SYSTEM GENERATED

Validation Rules:

Description: A unique identifier for the author(s) of a taxonomic name.

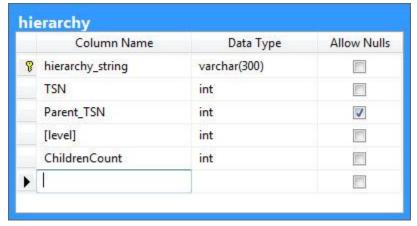
18.2.2 shortauthor

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The author(s) associated with the name of a taxon with parenthesis, commas and periods removed. Designed to be helpful when searching for an author whose name contains a different punctuation for different taxon names.

19.0 Definitions for the entity hierarchy and its elements



19.1 hierarchy Description

A support table that provides an accepted or valid Taxonomic Units full TSN hierarchy in a single string.

@1 hierarchy_string +

TSN +

Parent_TSN +

[level] +

ChildrenCount

19.2 hierarchy Elements

19.2.1 hierarchy_string

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The concatenated TSNs, delimited with a hyphen, which represents the hierarchy

from Kingdom to TSN of concern.

19.2.2 TSN

Name:TSN Element Size: Table: hierarchy

Display Picture: Data Type: INT SQL Server Name: TSN

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules: A taxonomic serial number will be assigned for occurrences of Taxonomic Units at each level of the hierarchy through genus and for all polynomial infrageneric Taxonomic Units.

Description: The TSN for the hierarchy entry. Taxonomic Serial Number. The unique identifier

for an occurrence of Taxonomic Units.

19.2.3 Parent TSN

Name: Parent_TSNElement Size:Table: hierarchyDisplay Picture:Data Type: INTSQL Server Name:

Parent_TSN

Nullness: NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The direct parent TSN of hierarchy.TSN.

19.2.4 [level]

Name: [level] Element Size: Table: hierarchy

Display Picture: Data Type: INT SQL Server Name: [level]

Nullness: NOT NULL Values List:

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The distance down the hierarchy from Kingdom to TSN of concern for the hierarchy

entry. For example, TSN 51, Schizomycetes, a Bacteria Class, has a level of 2.

19.2.5 ChildrenCount

Name: ChildrenCount Element Size: Table: hierarchy
Display Picture: Data Type: INT SQL Server Name:
ChildrenCount

Values List:

Nullness: NOT NULL Values List

Data Source: SYSTEM GENERATED

Validation Rules:

Description: The number of total children a particular TSN has, from its direct children to the

bottom of the hierarchy.

20.0 Deprecated Tables

There are entities within ITIS which are not currently in use. They are synonym_names and reviews.

20.1 synonym_names Description

Designed to store the TSNs and complete names of not accepted and invalid names, and their corresponding accepted or valid TSNs and complete names. ITIS relies upon the synonym_links table to relate not accepted and invalid names to their accepted and valid names.

20.2 reviews Description

Once used for descriptions of evaluations, either periodic or requested, undertaken to add credence to the data supported by the ITIS. ITIS relies upon links to sources (Experts, Publications, and Other Sources) to provide evidence for taxonomic decisions.